

09/857669

WO 00/34480

PCT/EP99/09560  
531 Rec'd PCT/ 07 JUN 2001

## SEQUENCE LISTING

&lt;110&gt; SmithKline Beecham Biologicals S.A.

&lt;120&gt; Novel compounds

&lt;130&gt; BM45339

&lt;160&gt; 11

&lt;170&gt; FastSEQ for Windows Version 3.0

&lt;210&gt; 1

&lt;211&gt; 1830

&lt;212&gt; DNA

<213> *Neisseria meningitidis*

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&lt;211&gt; 609

&lt;212&gt; PRT

<213> *Neisseria meningitidis*

&lt;400&gt; 2

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Gly	Phe	Ala	Leu	Phe	Lys	Asn	Lys	Ser	Pro	Asp	Thr	Glu	Ser	Val	Lys
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Leu	Lys	Pro	Lys	Phe	Pro	Val	Arg	Ile	Asp	Thr	Gln	Asp	Ser	Glu	Ile
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65															80
Glu	Val	Leu	Asp	Lys	Glu	Gln	Thr	Gly	Phe	Leu	Ala	Glu	Glu	Ala	Pro
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Asp	Asn	Val	Lys	Thr	Met	Leu	Arg	Ser	Lys	Gly	Tyr	Phe	Ser	Ser	Lys
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115															125
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Ser Gly Leu Ala Arg Phe Gln Pro Gly Thr Pro Tyr Asp Leu Asp Leu  
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275                    280                    285  
Val Lys Val Ser Val Thr Glu Val Lys Arg His Lys Leu Glu Thr Gly  
290                    295                    300  
Ile Arg Leu Asp Ser Glu Tyr Gly Leu Gly Gly Lys Ile Ala Tyr Asp  
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Tyr Tyr Asn Leu Phe Asn Lys Gly Tyr Ile Gly Ser Val Val Trp Asp  
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Met Asp Lys Tyr Glu Thr Thr Leu Ala Ala Gly Ile Ser Gln Pro Arg  
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Asn Tyr Arg Gly Asn Tyr Trp Thr Ser Asn Val Ser Tyr Asn Arg Ser  
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Thr Thr Gln Asn Leu Glu Lys Arg Ala Phe Ser Gly Gly Ile Trp Tyr  
370                    375                    380  
Val Arg Asp Arg Ala Gly Ile Asp Ala Arg Leu Gly Ala Glu Phe Leu  
385                    390                    395                    400  
Ala Glu Gly Arg Lys Ile Pro Gly Ser Asp Ile Asp Leu Gly Asn Ser  
405                    410                    415  
His Ala Thr Met Leu Thr Ala Ser Trp Lys Arg Gln Leu Leu Asn Asn  
420                    425                    430  
Val Leu His Pro Glu Asn Gly His Tyr Leu Asp Gly Lys Ile Gly Thr  
435                    440                    445  
Thr Leu Gly Thr Phe Leu Ser Ser Thr Ala Leu Ile Arg Thr Ser Ala  
450                    455                    460  
Arg Ala Gly Tyr Phe Phe Thr Pro Glu Asn Lys Lys Leu Gly Thr Phe  
465                    470                    475                    480  
Ile Ile Arg Gly Gln Ala Gly Tyr Thr Val Ala Arg Asp Asn Ala Asp  
485                    490                    495  
Val Pro Ser Gly Leu Met Phe Arg Ser Gly Gly Ala Ser Ser Val Arg  
500                    505                    510  
Gly Tyr Glu Leu Asp Ser Ile Gly Leu Ala Gly Pro Asn Gly Ser Val  
515                    520                    525

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 Ala Ala Asn Phe Lys Arg Met Lys Leu Lys His Gly Ser Gly Leu Gly  
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 Val Arg Trp Phe Ser Pro Leu Ala Pro Phe Ser Phe Asp Ile Ala Tyr  
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 <213> *Neisseria meningitidis*

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<213> *Neisseria meningitidis*

&lt;400&gt; 4

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							20			25			30		
Gly	Phe	Ala	Leu	Phe	Lys	Asn	Lys	Ser	Pro	Asp	Thr	Glu	Ser	Val	Lys
							35			40			45		
Leu	Lys	Pro	Lys	Phe	Pro	Val	Arg	Ile	Asp	Thr	Gln	Asp	Ser	Glu	Ile
							50			55			60		
Lys	Asp	Met	Val	Glu	Glu	His	Leu	Pro	Leu	Ile	Thr	Gln	Gln	Glu	
							65			70			75		80
Glu	Val	Leu	Asp	Lys	Glu	Gln	Thr	Gly	Phe	Leu	Ala	Glu	Glu	Ala	Pro
							85			90			95		
Asp	Asn	Val	Lys	Thr	Met	Leu	Arg	Ser	Lys	Gly	Tyr	Phe	Ser	Ser	Lys
							100			105			110		
Val	Ser	Leu	Thr	Glu	Lys	Asp	Gly	Ala	Tyr	Thr	Val	His	Ile	Thr	Pro
							115			120			125		
Gly	Pro	Arg	Thr	Lys	Ile	Ala	Asn	Val	Gly	Val	Ala	Ile	Leu	Gly	Asp
							130			135			140		
Ile	Leu	Ser	Asp	Gly	Asn	Leu	Ala	Glu	Tyr	Tyr	Arg	Asn	Ala	Leu	Glu
							145			150			155		160
Asn	Trp	Gln	Gln	Pro	Val	Gly	Ser	Asp	Phe	Asp	Gln	Asp	Ser	Trp	Glu
							165			170			175		
Asn	Ser	Lys	Thr	Ser	Val	Leu	Gly	Ala	Val	Thr	Arg	Lys	Gly	Tyr	Pro
							180			185			190		
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225                    230                    235                    240  
Ser Gly Leu Ala Arg Phe Gln Pro Gly Thr Pro Tyr Asp Leu Asp Leu  
245                    250                    255  
Leu Leu Asp Phe Gln Gln Ala Leu Glu Gln Asn Gly His Tyr Ser Gly  
260                    265                    270  
Ala Ser Val Gln Ala Asp Phe Asp Arg Leu Gln Gly Asp Arg Val Pro  
275                    280                    285  
Val Lys Val Ser Val Thr Glu Val Lys Arg His Lys Leu Glu Thr Gly  
290                    295                    300  
Ile Arg Leu Asp Ser Glu Tyr Gly Leu Gly Gly Lys Ile Ala Tyr Asp  
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Thr Thr Gln Asn Leu Glu Lys Arg Ala Phe Ser Gly Gly Ile Trp Tyr  
370                    375                    380  
Val Arg Asp Arg Ala Gly Ile Asp Ala Arg Leu Gly Ala Glu Phe Leu  
385                    390                    395                    400  
Ala Glu Gly Arg Lys Ile Pro Gly Ser Asp Ile Asp Leu Gly Asn Ser  
405                    410                    415  
His Ala Thr Met Leu Thr Ala Ser Trp Lys Arg Gln Leu Leu Asn Asn  
420                    425                    430  
Val Leu His Pro Glu Asn Gly His Tyr Leu Asp Gly Lys Ile Gly Thr  
435                    440                    445  
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Arg Ala Gly Tyr Phe Phe Thr Pro Glu Asn Lys Lys Leu Gly Thr Phe  
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515                    520                    525

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&lt;211&gt; 1764

&lt;212&gt; DNA

<213> *Neisseria meningitidis*

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 <213> *Neisseria meningitidis*

<400> 6

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Val	Leu	Ile	Asp	Thr	Gln	Asp	Ser	Glu	Ile	Lys	Asp	Met	Val	Glu	Glu	
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His	Leu	Pro	Leu	Ile	Thr	Gln	Gln	Gln	Glu	Glu	Val	Leu	Asp	Lys	Glu	
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Gln	Thr	Gly	Phe	Leu	Ala	Glu	Glu	Ala	Pro	Asp	Asn	Val	Lys	Thr	Met	
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Asp	Gly	Ala	Tyr	Thr	Val	His	Ile	Thr	Pro	Gly	Pro	Arg	Thr	Lys	Ile	
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Ala	Asn	Val	Gly	Val	Ala	Ile	Leu	Gly	Asp	Ile	Leu	Ser	Asp	Gly	Asn	
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Leu	Ala	Glu	Tyr	Tyr	Arg	Asn	Ala	Leu	Glu	Asn	Trp	Gln	Gln	Pro	Val	
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Gly	Ser	Asp	Phe	Asp	Asp	Gln	Asp	Ser	Trp	Glu	Asn	Ser	Lys	Thr	Ser	Val
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								180			185			190		
Val	Val	Asp	Ser	Gly	Arg	Pro	Ile	Ala	Phe	Gly	Asp	Phe	Glu	Ile	Thr	
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Gln Pro Gly Met Pro Tyr Asp Leu Asp Leu Leu Asp Phe Gln Gln  
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245 250 255  
Phe Asp Arg Leu Gln Gly Asp Arg Val Pro Val Lys Val Ser Val Thr  
260 265 270  
Glu Val Lys Arg His Lys Leu Glu Thr Gly Ile Arg Leu Asp Ser Glu  
275 280 285  
Tyr Gly Leu Gly Gly Lys Ile Ala Tyr Asp Tyr Tyr Asn Leu Phe Asn  
290 295 300  
Lys Gly Tyr Ile Gly Ser Val Val Trp Asp Met Asp Lys Tyr Glu Thr  
305 310 315 320  
Thr Leu Ala Ala Gly Ile Ser Gln Pro Arg Asn Tyr Arg Gly Asn Tyr  
325 330 335  
Trp Thr Ser Asn Val Ser Tyr Asn Arg Ser Thr Thr Gln Asn Leu Glu  
340 345 350  
Lys Arg Ala Phe Ser Gly Gly Val Trp Tyr Val Arg Asp Arg Ala Gly  
355 360 365  
Ile Asp Ala Arg Leu Gly Ala Glu Phe Leu Ala Glu Gly Arg Lys Ile  
370 375 380  
Pro Gly Ser Ala Val Asp Leu Gly Asn Ser His Ala Thr Met Leu Thr  
385 390 395 400  
Ala Ser Trp Lys Arg Gln Leu Leu Asn Asn Val Leu His Pro Glu Asn  
405 410 415  
Gly His Tyr Leu Asp Gly Lys Ile Gly Thr Thr Leu Gly Thr Phe Leu  
420 425 430  
Ser Ser Thr Ala Leu Ile Arg Thr Ser Ala Arg Ala Gly Tyr Phe Phe  
435 440 445  
Thr Pro Glu Asn Lys Lys Leu Gly Thr Phe Ile Ile Arg Gly Gln Ala  
450 455 460  
Gly Tyr Thr Val Ala Arg Asp Asn Ala Asp Val Pro Ser Gly Leu Met  
465 470 475 480  
Phe Arg Ser Gly Gly Ala Ser Ser Val Arg Gly Tyr Glu Leu Asp Ser  
485 490 495  
Ile Gly Leu Ala Gly Pro Asn Gly Ser Val Leu Pro Glu Arg Ala Leu  
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Leu Val Gly Ser Leu Glu Tyr Gln Leu Pro Phe Thr Arg Thr Leu Ser  
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Gly Ala Val Phe His Asp Met Gly Asp Ala Ala Asn Phe Lys Arg

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Met Lys Leu Lys His Gly Ser Gly Leu Gly Val Arg Trp Phe Ser Pro  
545                    550                    555                    560  
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